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- 5 NanoRelease: Pilot interlaboratory comparison of a weathering
- 6 protocol applied to resilient and labile polymers with and without
- 7 embedded CNTs

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This archive organizes data folders in the following hierarchy:

- 26 1. By analysis lab (EPA, BASF, NRC)
- 27 2. By method (SEM, EDXS, TEM, ICPMS, UVVis, AUC, FFF)
- 3. By sample codes (which include aging lab, CNT content and position in aging chamber)

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30 Specifically, the sample Coding / Numbering System is:

| Aging Lab | Polymer matrix | CNT identifier – position identifier # | Analysis Type (wipe or | Example of Sample Number | |
|-----------|-------------------|--|---------------------------|-----------------------------|--|
| | IIIatiix | identifier # | leachate) | Number | |
| I | P - | 0-1, 0-2, 0-3, 0-4 for leachate | W – wipe test | IE4-5W = Generated by | |
| (BASF) | polyamide | 0-5, 0-6, 0-7, 0-8 for wipe | sample | BASF, 0.25% CNT epoxy, | |
| | | 4-1, 4-2, 4-3, 4-4 for leachate | L – leachate | sample #5 (for wipe test | |
| | E - epoxy | 4-5, 4-6, 4-7, 4-8 for wipe | test sample | at ERDC) | |
| II | P - | 0-1, 0-2, 0-3, 0-4 for leachate | W – wipe test | (no aging was | |
| | polyamide | 0-5, 0-6, 0-7, 0-8 for wipe | sample | performed, instead | |
| | | 4-1, 4-2, 4-3, 4-4 for leachate | L – leachate | these specimens were | |
| | E - epoxy | 4-5, 4-6, 4-7, 4-8 for wipe | test sample | used for various control | |
| | | | | measurements) | |
| III | P - | 0-1, 0-2, 0-3, 0-4 for leachate | W – wipe test | IVP0-1L = Generated by | |
| (EPA – | polyamide | 0-5, 0-6, 0-7, 0-8 for wipe | sample | EPA-Cin 0% CNT | |
| Ath) | | 4-1, 4-2, 4-3, 4-4 for leachate | L – leachate | polyamide, sample #1 | |
| | E - epoxy | 4-5, 4-6, 4-7, 4-8 for wipe | test sample | (for leachate test at | |
| | | | | BASF) | |
| IV | P - | 0-1, 0-2, 0-3, 0-4 for leachate | W – wipe test | | |
| (EPA – | polyamide | 0-5, 0-6, 0-7, 0-8 for wipe | sample | | |
| Cin) | | 4-1, 4-2, 4-3, 4-4 for leachate | L – leachate | | |
| | Е - ероху | 4-5, 4-6, 4-7, 4-8 for wipe | test sample | | |
| V | P - | 0-1, 0-2, 0-3, 0-4 for leachate | W – wipe test | | |
| (LEITAT) | polyamide | 0-5, 0-6, 0-7, 0-8 for wipe | sample | | |
| | | 4-1, 4-2, 4-3, 4-4 for leachate | L – leachate | | |
| | E - epoxy | 4-5, 4-6, 4-7, 4-8 for wipe | test sample | | |

As described in the Supporting Information, the position identifier specifies the map of specimens

34 inside the SUNTEST XLS+ chamber



| Row# | Line 6 | | Line 5 | | Line 4 | Line 3 | Line 2 | Line 1 | | | |
|------|-------------------------------|-------|--------|-------|--------|--------|--------|--------|--|--|--|
| | REAR OF CHAMBER (less spray) | | | | | | | | | | |
| 4 | E4-7W | E4-8W | E4-5W | E4-6W | E4-4L | E4-3L | E4-2L | E4-1L | | | |
| 3 | E0-7W | E0-8W | E0-5W | E0-6W | E0-4L | E0-3L | E0-2L | E0-1L | | | |
| 2 | P4-7W | P4-8W | P4-5W | P4-6W | P4-4L | P4-3L | P4-2L | P4-1L | | | |
| 1 | P0-7W | P0-8W | P0-5W | P0-6W | P0-4L | P0-3L | P0-2L | P0-1L | | | |
| | FRONT OF CHAMBER (more spray) | | | | | | | | | | |

- The shipping and analysis is indicated by color code (which is applicable to the results in
- Figs. 4, 7, 8, to 9C, 9D), as is summarized by the logistical scheme below:
- Samples 1 & 2 to BASF for leachate.

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- Samples 3 & 4 to EPA-Ath for leachate.
 - Samples 5 & 6 to ERDC for wipe test (not reported here)
 - Samples 7 & 8 to NRC for wipe test (only surface characterization reported here)

Analysis Labs Aging Labs Materials BASF 4 x 2 wafers PA 0% 4 x 2 wafers PA 4% 4 x 2 wafers E 0% 4 x 2 wafers E 0.25% I. BASF 8 wafers PA 0% 8 wafers PA 4% Total 32 wafers for leach analysis 32 wafers PA 0% CNT (UV-Vis, TEM, AUC, ICP-MS) 32 wafers PA 4% CNT Total 64 wafers III. EPA (ATH) 8 wafers PA 0% 8 wafers PA 4% EPA (ATH) 8 wafers PA 0% CNT 8 wafers PA 4% CNT 8 wafers E 0% 8 wafers E 0.25% 4 x 2 wafers PA 0% 4 x 2 wafers PA 4% 4 x 2 wafers E 0% IV. EPA (CIN) 8 wafers E 0% CNT 8 wafers E 0.25% CNT Total 32 wafers for leach analysis 8 wafers PA 4% 8 wafers E 0% 8 wafers E 0.25% (UV-Vis, TEM, FFF, ICP-MS) 32 wafers E 0% CNT 32 wafers E 0.25% CNT NRC V. LEITAT 4 x 2 wafers PA 0% 4 x 2 wafers PA 4% 8 wafers PA 0% 8 wafers PA 4% 4 x 2 wafers E 0% 8 wafers E 0% 8 wafers E 0,25% Total 32 wafers for wipe test (SEM/EDX)